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NISSAN ARMADA

MODEL TA60 SERIES

QUICK REFERENCE INDEX

A GENERAL INFORMATION	GI General Information
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	LU Engine Lubrication System
	CO Engine Cooling System
	EC Engine Control System
	FL Fuel System
	EX Exhaust System
	ACC Accelerator Control System
C TRANSMISSION/ TRANSAXLE	AT Automatic Transmission
D DRIVELINE/AXLE	TF Transfer
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	FFD Front Final Drive
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	FSU Front Suspension
E SUSPENSION	RSU Rear Suspension
	WT Road Wheels & Tires
	BR Brake System
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	BRC Brake Control System
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H RESTRAINTS	SRS Supplemental Restraint System (SRS)
	BL Body, Lock & Security System
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FOREWORD

This manual contains maintenance and repair procedures for the 2005 NISSAN ARMADA.

In order to assure your safety and the efficient functioning of the vehicle, this manual should be read thoroughly. It is especially important that the PRECAUTIONS in the GI section be completely understood before starting any repair task.

All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.

IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the technician and the efficient functioning of the vehicle.

The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately. Service varies with the procedures used, the skills of the technician and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.



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Technical Publications Department
• Gardena, California



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SERVICE MANUAL: Model: _____ Year: _____

PUBLICATION NO. (Refer to Quick Reference Index): _____

Please describe any Service Manual issues or problems in detail:

Page number(s) _____ *Note: Please include a copy of each page, marked with your comments.*

Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES NO

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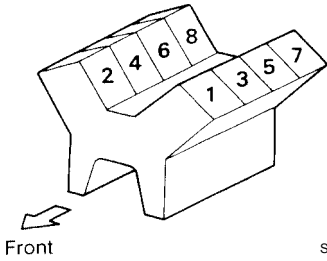
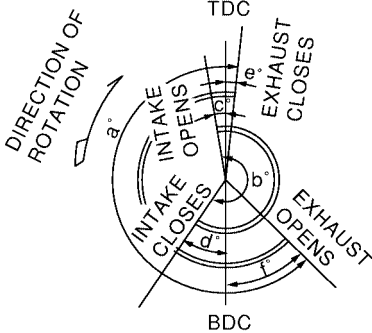
CITY: _____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

QUICK REFERENCE CHART: ARMADA

PFP:00000

Engine Tune-Up Data

ELS001TX

Cylinder arrangement		V-8			
Displacement		5,552 cm ³ (338.80 in ³)			
Bore and stroke		98 x 92 mm (3.86 x 3.62 in)			
Valve arrangement		DOHC			
Firing order		1-8-7-3-6-5-4-2			
Number of piston rings	Compression	2			
	Oil	1			
Number of main bearings		5			
Compression ratio		9.8:1			
Compression pressure	Standard	1,520 kPa (15.5 kg/cm ² , 220 psi) / 200 rpm			
	Minimum	1,324 kPa (13.5 kg/cm ² , 192 psi) / 200 rpm			
	Differential limit between cylinders	98 kPa (1.0 kg/cm ² , 14 psi) / 200 rpm			
Cylinder number		 SEM957C			
Valve timing		 PBIC0187E			
a	b	c	d	e	f
232°	230°	2°	48°	3°	49°

Drive Belt Deflection and Tension

Tension of drive belts	Auto adjustment by auto tensioner
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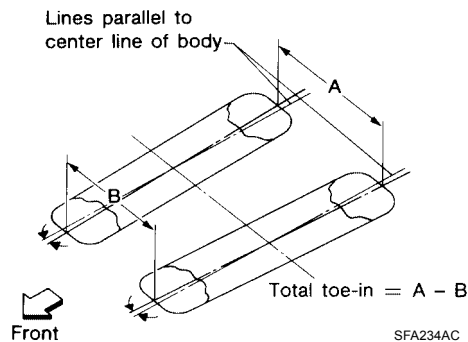
Spark Plugs (Double Platinum Tipped)

Make	NGK
Standard type	PLFR5A-11
Hot type	PLFR4A-11
Cold type	PLFR6A-11
Gap (nominal)	1.1 mm (0.043 in)

Front Wheel Alignment (Unladen*¹)*⁶

ELS001TY

Drive type			4x2	4x4
Camber Degree minute (decimal degree)	Minimum		-0° 51' (-0.85°)	-0° 33' (-0.55°)
	Nominal		-0° 6' (-0.10°)	0° 12' (0.20°)
	Maximum		0° 39' (0.65°)	0° 57' (0.95°)
	Cross camber		0° 45' (0.75°) or less	0° 45' (0.75°) or less
Caster Degree minute (decimal degree)	Minimum	Standard	2° 21' (2.35°)	2° 15' (2.25°)
		Air leveling	3° 15' (3.25°)	2° 45' (2.75°)
	Nominal	Standard	3° 24' (3.40°)	3° 0' (3.00°)
		Air leveling	4° 0' (4.00°)	3° 30' (3.50°)
	Maximum	Standard	4° 09' (4.15°)	3° 45' (3.75°)
		Air leveling	4° 45' (4.75°)	4° 15' (4.25°)
	Cross caster		0° 45' (0.75°) or less	0° 45' (0.75°) or less
Kingpin inclination Degree minute (decimal degree)			13° 32' (13.53°)	13° 13' (13.22°)



Total toe-in	Distance (A - B)	Minimum	1.8 mm (0.07 in)	1.8 mm (0.07 in)
		Nominal	2.8 mm (0.11 in)	2.8 mm (0.11 in)
		Maximum	3.8 mm (0.15 in)	3.8 mm (0.15 in)
	Angle (left side and right side) Degree minute (decimal degree)	Minimum	0° 3' (0.05°)	0° 3' (0.05°)
		Nominal	0° 5' (0.08°)	0° 5' (0.08°)
		Maximum	0° 7' (0.12°)	0° 7' (0.12°)
Wheel turning angle (full turn)	Inside Degree minute (decimal degree)		34° 30' - 38° 30' * ² (34.50° - 38.50°)	34° 56' - 38° 56' * ⁴ (34.93° - 38.93°)
	Outside Degree minute (decimal degree)		30° 58' - 34° 58' * ³ (30.97° - 34.97°)	31° 01' - 35° 01' * ⁵ (31.02° - 35.02°)

*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*2: Target value 37° 30' (37.50°)

*3: Target value 33° 58' (33.97°)

*4: Target value 37° 56' (37.93°)

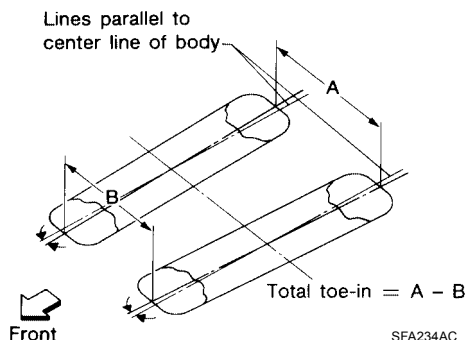
*5: Target value 34° 01' (34.02°)

*6: Some vehicles may be equipped with straight (non-adjustable) lower link bolts and washers. In order to adjust camber and caster on these vehicles, first replace the lower link bolts and washers with adjustable (cam) bolts and washers.

Rear Wheel Alignment (Unladen*¹)

ELS001T2

Applied model		Without air leveling	With air leveling
Camber Degree minute (decimal degree)	Minimum	- 0° 25' (- 0.4°)	- 1° 0' (- 1°)
	Nominal	0° 5' (0.1°)	- 0° 30' (- 0.5°)
	Maximum	0° 35' (0.6°)	0° 0' (0°)
	Cross camber	0° 45' (0.75°) or less	



Total toe-in	Distance (A - B)	Minimum	- 2.4 mm (- 0.094 in)	0 mm (0 in)
		Nominal	0.9 mm (0.035 in)	3.3 mm (0.130 in)
		Maximum	4.2 mm (0.165 in)	6.6 mm (0.260 in)
		Cross toe	2 mm (0.079 in) or less	
	Angle (left side and right side) Degree minute (decimal degree)	Minimum	- 0° 5' (- 0.8°)	0° 0' (0°)
		Nominal	0° 2' (0.03°)	0° 7' (0.11°)
		Maximum	0° 9' (0.14°)	0° 14' (0.22°)
		Cross toe	0° 8' (0.14°) or less	

*1: Fuel tank, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

Brake

ELS001U0

Unit: mm (in)

Front brake	Brake model	CLZ31VC
	Rotor outer diameter × thickness	320 × 26 (12.60 × 1.02)
	Pad Length × width × thickness	111.0 × 73.5 × 9.5 (4.73 × 2.894 × 0.374)
	Cylinder bore diameter	51 (2.01)
Rear brake	Brake model	AD14VE
	Rotor outer diameter × thickness	320 × 14 (12.60 × 0.55)
	Pad Length × width × thickness	83.0 × 33.0 × 8.5 (3.268 × 1.299 × 0.335)
	Cylinder bore diameter	48 (1.89)
Control valve	Valve model	Electric brake force distribution
Brake booster	Booster model	C215T
	Diaphragm diameter	215 (8.46)
Recommended brake fluid		Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent DOT 3 (US FMVSS No. 116)

QUICK REFERENCE CHART: ARMADA

2005

Disc Brake - Repair Limits

ELS001U1

Unit: mm (in)

Brake model		CLZ31VC (Front)	AD14VE (Rear)
Brake Pad	Standard thickness (new)	11.88 (0.468)	12.13 (0.478)
	Repair limit thickness	1.0 (0.039)	1.0 (0.039)
Disc rotor	Standard thickness (new)	26.0 (1.024)	14.0 (0.551)
	Repair limit thickness	24.5 (0.965)	12.0 (0.472)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.04 (0.0016)	0.05 (0.0020)

Brake Pedal

ELS001U2

Unit: mm (in)

Brake pedal height (from dash panel top surface)	182.3 – 192.3 (7.18 – 7.57)
Depressed pedal height [under a force of 490 N (50 kg, 110 lb) with engine running]	More than 90.3 (3.55)
Clearance between stopper rubber and the threaded end of stop lamp switch	0.74 – 1.96 (0.029 – 0.077)
Pedal play	3 – 11 (0.12 – 0.43)

Refill Capacities

ELS001U3

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		105.8 ℓ	28 gal	23 1/4 gal
Engine oil Drain and refill	With oil filter change	6.2 ℓ	6 1/2 qt	5 1/2 qt
	Without oil filter change	5.9 ℓ	6 1/4 qt	5 1/4 qt
Dry engine (engine overhaul)		7.6 ℓ	8 qt	6 3/4 qt
Cooling system	With reservoir at MAX level	14.4 ℓ	3 3/4 gal	3 1/8 gal
Automatic transmission fluid (ATF)		10.6 ℓ	11 1/4 qt	9 3/8 qt
Rear final drive oil		1.75 ℓ	3 3/4 pt	3 1/8 pt
Transfer fluid		3.0 ℓ	3 1/8 qt	2 5/8 qt
Front final drive oil		1.6 ℓ	3 3/8 pt	2 7/8 pt
Power steering fluid (PSF)		1.0 ℓ	2 1/8 pt	1 3/4 pt
Windshield washer fluid		4.5 ℓ	1 1/4 gal	1 gal
Air conditioning system refrigerant		1.08 ± 0.05 kg	2.38 ± 0.11 lb	2.38 ± 0.11 lb
Air conditioning system lubricant		290 m ℓ	9.8 fl oz	10.2 fl oz